A New Species of *Campyloneurum* (Polypodiaceae) from Northwestern Ecuador

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ABSTRACT. *Campyloneurum oellgaardii* is newly described from a humid western premontane Andean forest of Ecuador. It appears to belong to the *sphenodes* group, which is characterized by undivided primary areoles and long petiolate leaves, and which includes *C. coarctatum*, *C. inflatum*, *C. sphenodes*, and *C. sublucidum*.

During a study of the fern genus *Campyloneurum* C. Presl, a distinctive new species was recognized and is described below.

Campyloneurum oellgaardii B. León, sp. nov. TYPE: Ecuador. Carchi: drainage of Cerro Golondrinas mountains, 0°52′N, 78°07′W, 21 Dec. 1987, *Hoover 2211* (holotype, MO; isotype, QCA). Figure 1.

Species *C. inflato* proxima, a qua rhizomate longe repenti, 6 mm crasso, atrofusco, dense paleaceo, squamis adpressis, brunneolis, foliis ampliori lanceolatis, 147 cm longis, 22 cm latis differt.

Epiphyte; stem long-creeping, black, not pruinose, 6 mm wide. Stem scales lax, light brown in mass, ovate, 3–4 mm long, 2–2.5 mm wide, bases auriculate, apices obtuse, margins entire with scattered hairs, slightly clathrate, the cells oblong or broadly oblong, cell walls 6–9 μm wide, several central cells with dark brown walls, walls of marginal cells yellowish or brownish, cell lumina transparent. Phyllopodia 4–5 mm long, 7–10 mm wide, 1–15 cm distant. Leaves pendulous (?), 147 cm long, petiole 55 cm long, shiny dark stramineous; laminas lanceolate, 22 cm wide, herbaceous-chartaceous, base cuneate, apex long-acuminate, margins cartilaginous, sinuate, leaves with inconspicuous bicellular glandular hairs scattered abaxially; stomata polocytic or rarely copolocytic; costa prominent, slightly angular abaxially; primary veins prominent, 75° divergent from the costa, straight, lighter in color than the adjacent tissue, 7–9 mm distant; secondary veins slightly prominulous on both sides of the lamina, transverse secondary veins forming 19–21 primary areoles between the costa and margin; primary areoles undivided, with 2(–3) excurrent free veinlets, the marginal ones sometimes divided with (0)–1 veinlet. Sori subapical on the excurrent veinlet; paraphyses and spores not seen.

Campyloneurum oellgaardii is known only from the type material, collected in northwestern Ecuador, at 1200 m elevation in a perhumid premontane forest. This locality borders on what Dodson & Gentry (1991) considered an extension of the Chocó pluvial forest. The specimen was found growing as an epiphyte several meters above the ground. Based on the curvature of the petiole (Fig. 1a), the leaves are probably pendently arched.

Campyloneurum oellgaardii is characterized by well-spaced and extraordinarily large leaves, more than 1 m long, in addition to its undivided primary non-costal areoles. Because of its habit, leaf morphology, and pattern of venation this species fits within the *sphenodes* group of León (1992). Besides this new species, the *sphenodes* group consists of *C. chrysopodum* (Klotzsch) Fée, *C. coarctatum* (Kunze) Fée, *C. falcoideum* (Kuhn ex Hieronymus) M. Meyer ex Lellinger, *C. inflatum* M. Meyer ex Lellinger, *C. sphenodes* (Kunze ex Klotzsch) Fée, and *C. sublucidum* (Christ) Ching. *Campyloneurum oellgaardii* differs from the other species of the group in having a larger stem diameter (6 mm vs. 2–3 mm), obtuse stem scales, and longer (more than 100 cm vs. (17–)30–70(–85) cm) and broader (20 cm vs. (2–)3–6(–10) cm) leaves.

Most species of *Campyloneurum* have leaves less than 1 m long. Leaves longer than this are otherwise found only in: (1) those species with entire leaves, short-creeping stems and *phyllitidis*-, *brevifolium*-venation (*phyllitidis*-, *latum*-venation of Lellinger, 1988) such as *C. abruptum* (Lindman) B. León, *C.*

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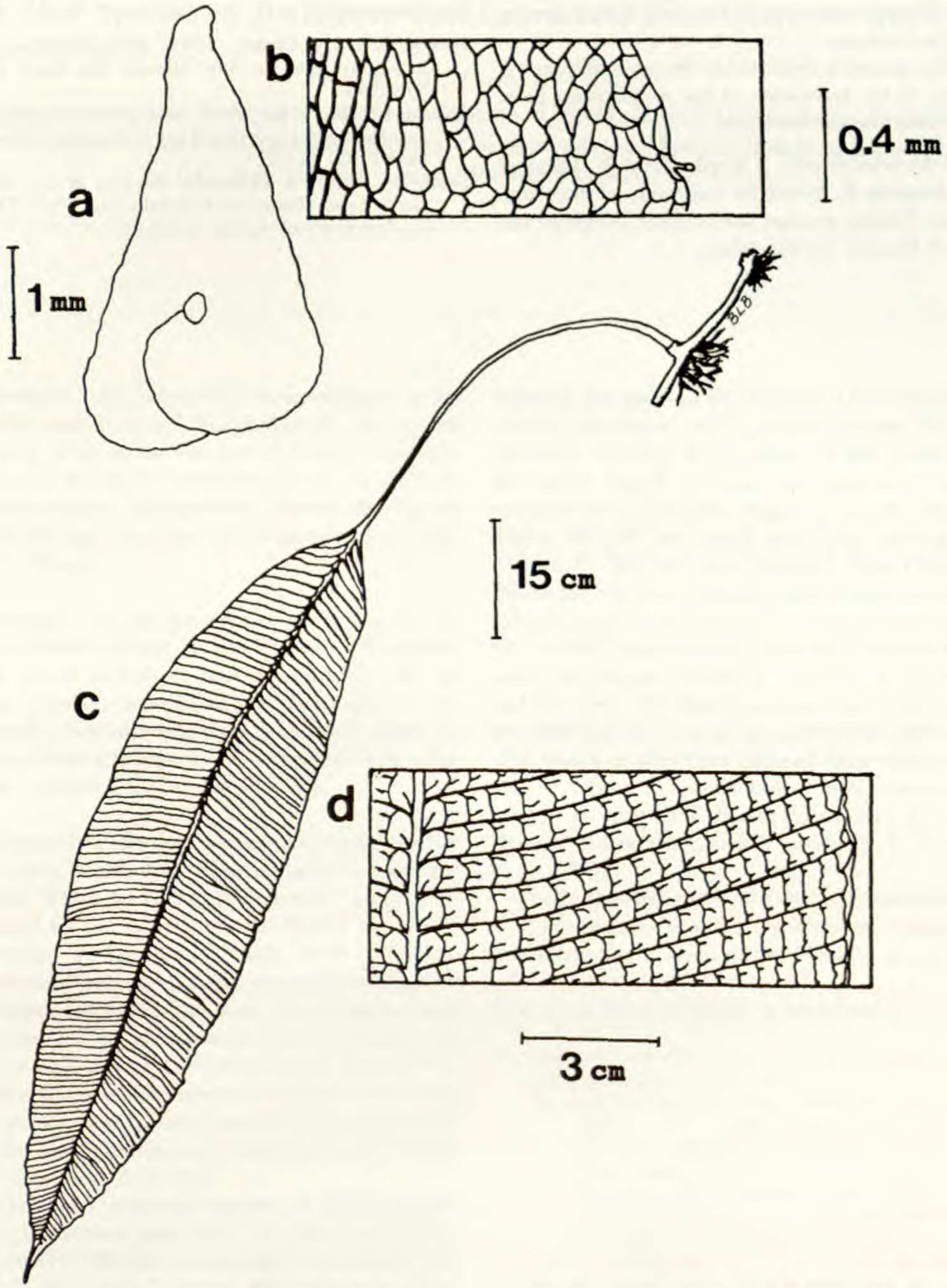

Figure 1. *Campyloneurum oellgaardii* B. León (from *Hoover 2211*). —a. Stem scale. —b. Cellular detail of stem scale. —c. Habit. —d. Pattern of venation. (Drawn by the author.)

brevifolium (Link) Link, *C. pascoense* R. M. Tryon & A. F. Tryon, *C. phyllitidis* (L.) C. Presl, and *C. tucumanense* (Hieronymus) Ching; and in (2) those pinnate-leaved species with undivided primary areoles, such as *C. decurrens* (Raddi) C. Presl and *C. magnificum* T. Moore. All these species are low epiphytes, epipetrics, or terrestrials, and they usually grow in partially closed forests. In contrast, *C. oellgaardii* is a high-canopy epiphyte, according to the collector, and its gigantism may be an adaptation

to a dense canopy and/or low risk of leaf damage due to breakage.

This species is dedicated to Benjamin Øllgaard in honor of his knowledge of the Ecuadorean flora, especially the pteridophytes.

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